

ANNOTATED CHECKLIST OF THE VASCULAR FLORA OF THE MENARD CREEK CORRIDOR UNIT OF THE BIG THICKET NATIONAL PRESERVE, POLK, LIBERTY, AND HARDIN COUNTIES, TEXAS

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ABSTRACT

An annotated, vouchered checklist is provided of the vascular plant taxa of the 1,537 hectare Menard Creek Corridor Unit, Big Thicket National Preserve, in Polk, Liberty, and Hardin counties, Texas. Documented for the unit are 689 taxa of which 70 (10%) are exotics.

RESUMEN

Se realiza un catálogo con anotaciones y testigos de los taxa de plantas vasculares de las 1,537 hectáreas de la Menard Creek Corridor Unit, Big Thicket National Preserve, en los condados de Polk, Liberty, y Hardin, Texas. Se documentan para la unidad 689 taxa de los que 70 (10%) son exóticos.

INTRODUCTION

This is the 7th part of an inventory, based upon available voucher specimens, of the vascular flora of the Big Thicket National Preserve, southeastern Texas. In six previous papers, we provided annotated checklists of the Hickory Creek, Turkey Creek, Big Sandy Creek, Lance Rosier, Beech Creek, and Loblolly units (MacRoberts et al. 2002; Brown et al. 2005, 2006a, 2008, 2008b). In this paper, we provide an annotated checklist of the Menard Creek Corridor Unit.

SITE AND METHODS

The Big Thicket is located in the West Gulf Coastal Plain in southeastern Texas (see Diggs et al. 2006 for literature and description). Peacock (1994) reported 12 units for the Big Thicket Biological Preserve. Since then the Big Sandy Creek Corridor (1,798 hectares), the Canyonlands (350 hectares), and the Village Creek Corridor (2,059) have been added. The addition of these 3 units has added 4,207 hectares to the 34,000 reported by Peacock in 1994. However, Deanna Boensch (per. comm.) indicated the total hectares are now 40,088. The units range from 222 to 10,000 hectares and are scattered over 7 Texas counties. The Menard Creek Corridor Unit (1,537 hectares) follows Menard Creek through parts of Polk, Liberty, and Hardin counties (Fig. 1). It is located on the Deweyville/Fluviatile formation within a small channel and narrow bottomlands consisting of Bibb sandy loam and Hatliff fine sandy loam soils that are frequently flooded (Deshotsels 1978; Aronow 1981; Shelby et al. 1992; Griffith 1996). Elevation ranges from about 46 meters at the Highway 943 bridge over Menard Creek in Polk County to 13 meters at the confluence with the Trinity River in Liberty County. The unit consists of bottomland forest next to the stream and lower slope-hardwood pine forest and upper slope pine-oak forest (Harcombe & Marks 1979; Marks & Harcombe 1981). Some other small distinct habitats that are mostly in Liberty County are Beech-Magnolia slopes where *Prenanthes*

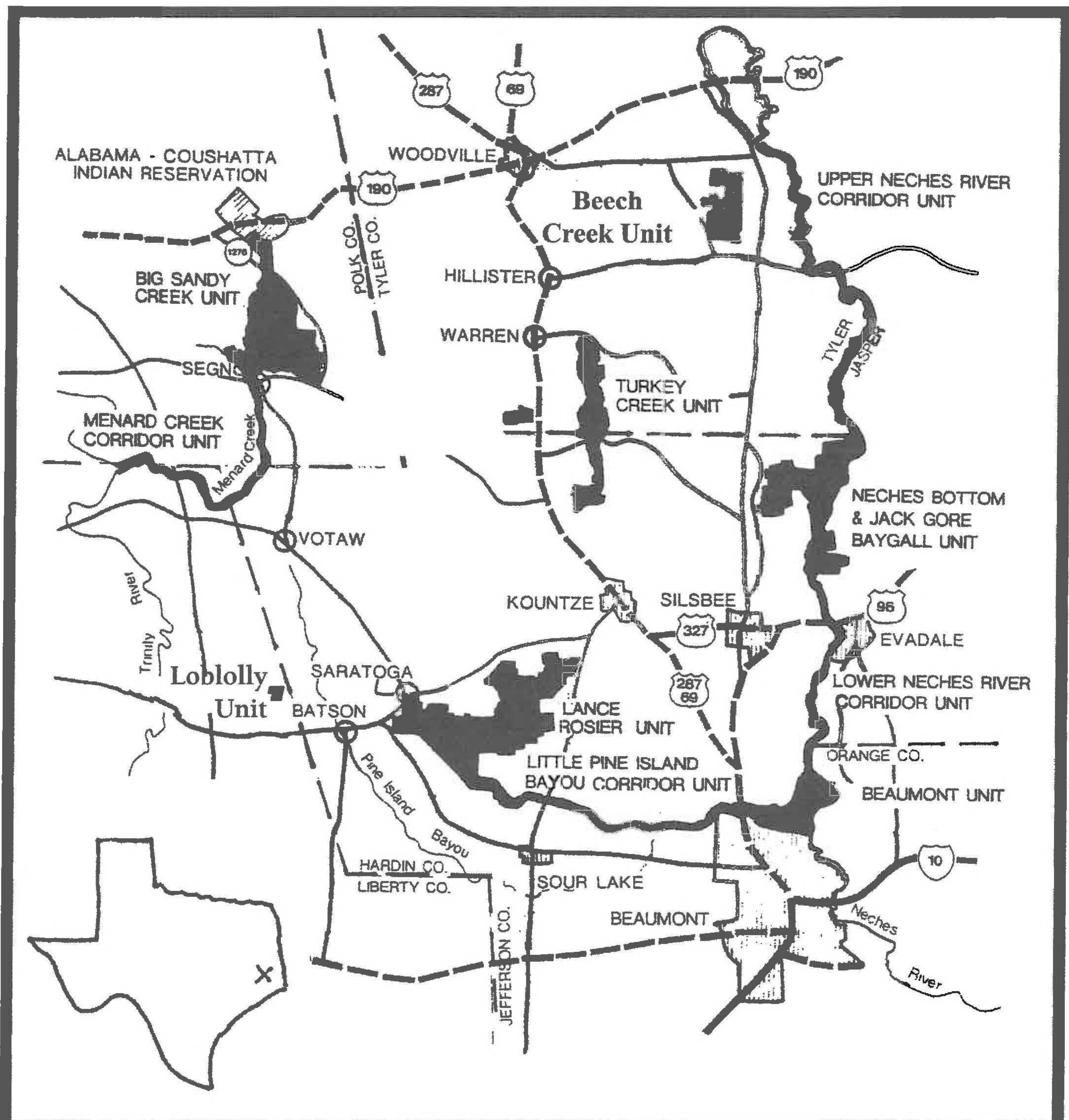


FIG. 1. Location of the Menard Creek Corridor Unit, Big Thicket National Preserve, Texas.

barbata, *Viburnum acerifolium*, *Cynoglossum virginianum*, and *Carex abscondita* are found; areas of deep sands where *Sida lindheimeri*, *Setaria corrugata*, *Mitracarpus hirta*, and *Silene subciliata* grow; alkaline soils with heliophyte plants such as *Verbesina helianthoides*, *Stenanthium gramineum*, *Liatris asper*, *Phyllanthus pudens*, and the 2 *Silphium* taxa. Another small habitat with a distinct flora is the alluvial soil exposed by receding water during late summer and fall at the confluence of Menard Creek and the Trinity River. Some of the plants only or mostly on these drawn-down sites are *Fimbristylis vahlii*, *Eragrostis reptans*, *Leptochloa panicea* subsp. *mucronata*, *Cyperus squarrosus*, *Cyperus odoratus*, *Eragrostis japonica*, *Marsilea vestita*, *Panicum virgatum*, and *Spermatoce glabra*.

Like all units of the Big Thicket National Preserve, the Menard Creek Corridor Unit had not previously been the subject of a detailed floristic inventory.

Because our purpose is to produce a list of taxa known to occur on the Menard Creek Corridor Unit, a vouchered specimen was considered to be the only evidence acceptable for inclusion in the list. In all, 1,137 herbarium specimens form the data for this report. All specimens have been annotated by Larry Brown.

Larry Brown collected 1,020 specimens beginning in the late 1980s and early 1990s and during 16 field days in 2007 and 2008. Geraldine Watson collected 106 specimens over several years in the late 1970s and early 1980s. The collection total of a few others is 13 and is designated by the appropriate abbreviation below.

In most cases, nomenclature follows Jones et al. (1997), Kartesz (1999), and Diggs et al. (2006). In cases of multiple collections, no more than 4 are listed for each taxon.

RESULTS

The following is an annotated list of the Menard Creek Corridor Unit taxa. Abbreviations used are given below.

CP = Charles Peterson. His one Azalea collection is at SBSC.

DB = Deanna Boensch. Big Thicket fire ecologist. She collected with LB and those are at TAES.

GW = Geraldine Watson. Her specimens are at TAES.

JL = Joe Liggio. His orchid specimens are at SBSC.

JS = Jeff Schultz. His one orchid collection is at SBSC.

LB = Larry Brown. His specimens with collection numbers above 23,000 are at TAES and those with numbers below 23,000 are at SBSC.

MM = Barbara and Michael MacRoberts. Their specimens are at TAES.

PR = Paul Roling. His collections are at TAES.

SH = Shawn Harper (Grandson of LB).

SM = Sam Harper (Grandson of LB).

WH = Walter Hesson. His one fern collection is at SBSC.

WRC = Bill Carr. His specimens are at TEX.

* = exotic

+ = see note at end of list.

! = taxa with this symbol have only been collected in the Menard Creek Unit when compared with the 7 other surveyed units which includes a preliminary species list of the Jack Gore-Neches Bottom unit.

A collection number followed by (P) is from Polk County. A collection number followed by (H) was collected in Hardin County. All others are from Liberty County.

Acanthaceae

Dicliptera brachiata (Pursh) Spreng., GW 3293, LB 32845

Hygrophila lacustris (Schlecht. & Cham.) Nees, LB 18779, 26104 (P)

Justicia ovata (Walter) Landau var. *lanceolata* (Chapm.) Long, LB 32694

Ruellia caroliniensis (Walter) Steud., LB 32913 (P)

Ruellia pedunculata Torr. ex A. Gray, PR s.n.

Ruellia strepens L., LB 18705, 33097

Aceraceae

Acer negundo L., GW 3236; LB 32523

Acer rubrum L., LB 33147, 26111 (P)

Agavaceae

Manfreda virginica (L.) Rose, LB 32563, 32879

Alismataceae

Sagittaria latifolia Willd. LBJL 32970, 32982 (P), LB 26113 (P), 5829 (P)

Sagittaria montevidensis Cham. & Schltld. subsp. *calycina* (Engelm.) Begin, LB 18831

Alliaceae

Allium canadense L. var. *canadense*, LBSH 33219

Allium canadense L. var. *mobilense* (Regel) Ownbey, LBSH, 33434 (P)

Nothoscordum bivalve (L.) Britton, LB 32847

Amaranthaceae

Amaranthus tuberculatus (Moq.) Sauer (including *A. rudis* Sauer), LB 18827; LBJL 32985

Froelichia floridana (Nutt.) Moq., LB 28810 (SBSC)

Irresine rhizomatosa Standl., LB 32884

Anacardiaceae

Rhus copallina L., LB 32700

Toxicodendron radicans (L.) Kuntze, LB 32528

Annonaceae

Asimina parviflora (Michx.) Dunal, LB 32574; LBSH (H)

Apiaceae

Chaerophyllum tainturieri Hook. var. *tainturieri*, LBSH 33212

Cicuta maculata L., LBSM 33547

**Cyclospermum leptophyllum* (Pers.) Sprague ex Britton & P. Wilson, LBSM 33542

Cynosciadium digitatum DC., GW 3247, 3255; LBSH 33419

Daucus pusillus Michx., GW 3260

Eryngium hookeri Walp., LB 32919

Eryngium prostratum Nutt. ex DC., LB 18616

Hydrocotyle verticillata Thunb., LB 28243 (P)

Limnosciadium pumilum (DC.) Mathias & Constance, LBSH 33420

Ptilimnium capillaceum (Michx.) Raf., LBSH 33415

Sanicula canadensis L., LB 32505; LBSH 33405

Spermolepis divaricata (Walter) Raf., LBPR 33356

**Spermolepis inermis* (Nutt.) Mathias & Constance, LBSH 33451 (P)

Thaspium trifoliatum (L.) A. Gray var. *aureum* Britton, GW 247; LB 18477, 32691; LBSH 33388

**Torilis arvensis* (Huds.) Link, GW 3248; LBDB 33655

Trepocarpus aethusae Nutt. ex DC., GW 3262; LBSH 33245

Apocynaceae

Amsonia tabernaemontana Walter, GW 3344

Trachelospermum difforme (Walter) A. Gray, LB 32714 (P), 32823, 25185

Aquifoliaceae

- Ilex ambigua* (Michx.) Torr., LB 18846; LBJL 32974
Ilex decidua Walter, LB 25179, 32908 (P); GW 3296a
Ilex longipes Chapm. ex Trel., GW 3157; LBJL 32983 (P), LB 33128; LBSH 33461 (P)
Ilex opaca Aiton, LB 32534, 22564
Ilex vomitoria Aiton, LB 32636

Araceae

- Arisaema dracontium* (L.) Schott., LB 23880; LBPR 33361
Arisaema triphyllum (L.) Schott., LB 18525, 23880a, 27734 (P);
 LBJL 32964

Araliaceae

- Aralia spinosa* L., LBSH 33332
**Hedera helix* L., LBSH 33399

Arecaceae

- Sabal minor* (Jacq.) Pers., LB 32856

Aristolochiaceae

- Aristolochia serpentaria* L., LB 33168 (P)

Asclepiadaceae

- Asclepias perennis* Walter, LB 18574
Asclepias tuberosa L., LB 32565
Asclepias variegata L., LBPR 33351
Matelea gonocarpos (Walter) Shinners, LB 32519

Aspleniaceae

- Asplenium platyneuron* (L.) Britton, Sterns & Poggenb., GW 3217; LB 32717

Asteraceae

- Acmella repens* (Walter) Richard, LB 18860
Ageratina altissima (L.) R. King & H. Rob. var. *altissima*, LB 18832,
 33149, 33174 (P); LBJL 32957
Ambrosia artemisiifolia L., LB 32854
Ambrosia trifida L., LB 32844, 32820, 32874
Arnoglossum ovatum (Walter) H. Rob. LB 15403
!Arnoglossum plantagineum Raf., LBSH 33323
Baccharis halimifolia L., GW 3297; LB 32859
Bidens aristosa (Michx.) Britton, LB 18553, 32920, 33105; LBJL
 32954
Bidens bipinnata L., GW 3286; LB 32930, 32916
Bidens discoidea (Torr. & A. Gray) Britton, LB 18820b (P)
Bidens frondosa L., LB 18511, 18859, 18241
Bradburia pilosa (Nutt.) Semple, LB 32552, 18743, 26108 (P)
!Calyptocarpus vialis Less., LBSH 33372
Chrysopsis mariana (L.) Elliott, LBJL 32978; LBSM 33540
Cirsium horridulum Michx. var. *megacanthum* (Nutt.) D.J. Keil,
 LBSH 33386
Conoclinium coelestinum (L.) DC., LB 32878
**Conyza bonariensis* (L.) Cronquist, GW 3251
Conyza canadensis (L.) Cronquist, LB 32654
!Coreopsis basalis (A. Dietr.) S.F. Blake, GW 3277; LB 18606,
 32463
Coreopsis lanceolata L., LBSH 33411
Coreopsis tinctoria Nutt. var. *tinctoria*, LB 32938; LBSM 33525
 (P)
Croptilon divaricatum (Nutt.) Raf., LB 32575, 32576
Echinacea sanguinea Nutt., LBSH 33516
- Eclipta prostrata* (L.) L., LB 18856, 32825
Elephantopus carolinianus Raeusch, LB 33155 (P)
Elephantopus nudatus A. Gray, GW 3284
Elephantopus tomentosus L., LB 32575, 18726
Erechtites hieraciifolia (L.) Raf. ex DC., LB 32747
Erigeron annuus (L.) Pers., GW 3276; LBSH 33377, 33443 (P);
 LBSM 33544
Erigeron philadelphicus L., LBSH 33467
Erigeron strigosus Muhl. ex Willd., GW 3267; LBSH 33512,
 33468
Erigeron tenuis Torr. & A. Gray, LBPR 33353; LBSH 33392,
 33416
Eupatorium capillifolium (Lam.) Small, LB 33129
 +*Eupatorium semiserratum* DC., LB 32675, 33153
Eupatorium serotinum Michx., LB 32877
Eurybia hemispherica (Alexander) G.L. Nesom, GW 3473; LB
 32812
Euthamia leptcephala (Torr. & A. Gray.) Greene, LB 32753,
 32821
Gaillardia pulchella Foug. var. *pulchella*, LB 32688
**Gamochaeta coarctata* (Willd.) Kerguelen, LBSH 33378
Gamochaeta pensylvanica (Willd.) Cabrera, LBSH 33244 (P)
Gamochaeta purpurea (L.) Cabrera, LBSH 33431, 33449a (P)
Helenium amarum (Raf.) H. Rock var. *amarum*, LB 33260, 32706,
 32928; LBSH 33438 (P)
Helianthus hirsutus Raf., GW 3512; LB 32705
Heterotheca subaxillaris (Lam.) Britton & Rusby, LB 32924
Hieracium gronovii L., GW 3311; LB 32504
Iva annua L., LB 32906 (P)
Krigia cespitosa (Raf.) K.L. Chambers var. *cespitosa*, GW 3369;
 LBSH 33240
Krigia cespitosa (Raf.) K.L. Chambers var. *Gracilis* (DC.) K.L.
 Chambers, LBSH 33247 (P)
!Krigia dandelion (L.) Nutt., LBSH 33325
Krigia virginica (L.) Willd. LBSH 33316
Krigia wrightii (A. Gray) K.L. Chambers ex K.J. Kim LBSH
 33313
Lactuca canadensis L., LB 32656
Lactuca floridana (L.) Gaertn., LB 32846
!Lactuca hirsuta Muhl., LBSM 33535
!Liatris asper Michx., GW 3503, 3504, 3505; LB 32562
Mikania scandens (L.) Willd., LB 32750
Packera glabella (Poir.) C. Jeffrey, LBSH 33225a, 33231
Packera obovata (Muhl. ex Willd.) W.A. Weber & Á. Löve, GW
 3324; LBSH 33321
Packera tampicana (DC.) C. Jeffrey, LB 18532
Pluchea camphorata (L.) DC., LBJL 32977
Pluchea foetida (L.) DC., LB 32939
 +*Prenanthes barbata* (Torr. & A. Gray) W.L. Milstead ex Cron-
 quist, LBJL 32972
Pyrrhopappus carolinianus (Walter) DC., LB 33103
Pyrrhopappus pauciflorus (D. Don) DC., LBSH 33249 (P)
Rudbeckia hirta L., LB 32697
!Silphium asteriscus L. var. *asteriscus* L., LB 32744
!Silphium asteriscus L. var. *simpsonii* (Greene) J.S. Clevinger,
 LBSM 33538
Solidago altissima L., LB 32850
Solidago ludoviciana (A. Gray) Small, LB 5839a

- Solidago rugosa* Mill. var. *asper* (Aiton) Fernald, LB 18854, 18865
Solidago tortifolia Elliott, LBJL 32979
**Soliva sessilis* Ruiz & Pavon, LBPR 33338
**Sonchus asper* (L.) Hill, LBSH 33242
**Sonchus oleraceus* L., LBSH 32264
Smallanthus uvedalia K. Mack. ex Small, LB 18707
!*Symphyotrichum drummondii* (Lindl.) G.L. Nesom, LB 32508; GW 3238
Symphyotrichum dumosum (L.) G.L. Nesom, LB 32873, 32872
!*Symphyotrichum ericoides* (L.) G.L. Nesom, LB 33154 (P)
!*Symphyotrichum lanceolatum* (Willd.) G.L. Nesom, LB 33083, 33130, 33133, 33145
Symphyotrichum lateriflorum (L.) Á. Löve & D. Löve, LB 18863, 18862
Symphyotrichum patens (Aiton) G.L. Nesom, LBSM 33541
Symphyotrichum racemosum (Elliott) G.L. Nesom, LB 18826, 19767, 33104; LBJL 32955
+*Verbesina helianthoides* Michx., LB 32568
Verbesina virginica L., LB 32564
Vernonia missurica Raf., LB 26102 (P), 32640; GW 3280
Vernonia texana (A. Gray) Small, LB 32566
Xanthium strumarium L., LB 32826
**Youngia japonica* (L.) DC., GW 3279
- Berberidaceae**
!**Nandina domestica* Thunb., LB 32830
Podophyllum peltatum L., PR s.n.
- Betulaceae**
Betula nigra L., LB 18603, 33122 (P), 33159 (P), 28249 (P)
Carpinus caroliniana Walter, LB 18600a
Ostrya virginiana K. Koch, LB 32628
- Bignoniaceae**
Bignonia capreolata L., LB 32517, 18502, 27743 (P)
Campsis radicans (L.) Seem. ex Bureau, LB 32689
Catalpa bignonioides Walter, LBSH 33460 (P)
- Blechnaceae**
Woodwardia areolata (L.) T. Moore, LB 26118 (P), 32555, 18520, 18744
Woodwardia virginica (L.) Sm., LB 19025, 33158 (P)
- Boraginaceae**
Cynoglossum virginianum L., GW 3195, 3239; LBPR 33358
**Heliotropium indicum* L., LB 18825, 32842, 17515 (P)
Heliotropium procumbens Mill., LB 18842, 32887
Myosotis macrosperma Engelm., LB 18497
- Brassicaceae**
**Cardamine hirsuta* L., LBSH 33205
Cardamine parviflora L. var. *arenicola* (Britton) O.E. Schulz, GW 3204a, 3205
Lepidium virginicum L., LB 32647; LBSH 33317
Rorippa sessiliflora (Nutt.) Hitchc., GW 3189, 3204b; LB 18829, 32899
- Buddlejaceae**
Polypteron procumbens L., LB 32935
- Burmanniaceae**
Burmannia biflora L., LB 18778
- Callitrichaceae**
Callitricha heterophylla Pursh, LBSH 33253 (P)
- Campanulaceae**
Lobelia appendiculata A. DC., LBPR 33352, 33440 (P); LBSM 33539
Lobelia cardinalis L. var. *cardinalis*, LB 32935
Lobelia puberula Michx., LB 32927; LBJL 32958
Triodanis biflora (Ruiz & Pav.) Greene, LBSH 33457a
!*Triodanis lamprosperma* McVaugh, LBSH 33423, 33456 (P)
Triodanis perfoliata (L.) Nieuwl., GW 3234, 3235; LBSH 33398
**Wahlenbergia marginata* (Thunb.) A. DC., LBSH 33448 (P)
- Caprifoliaceae**
**Lonicera japonica* Thunb., LB 32718
Lonicera sempervirens L., LBSH 33236
Sambucus nigra L. subsp. *canadensis* (L.) Bollii, LB 32516; LBJL 32962
!*Syphoricarpos orbiculatus* Moench., LB 18529, 18708
Viburnum acerifolium L., 18516, 24130, 33125
Viburnum dentatum L., LB 32634, 32624
Viburnum nudum L., LB 18499
Viburnum rufidulum Raf., LB 32812
- Caryophyllaceae**
**Cerastium glomeratum* Thuill., LBSH 33208
Loeflingia squarrosa Nutt., LBPR 33355
Sagina decumbens (Elliott) Torr. & A. Gray, LBPR 33353
**Stellaria media* (L.) Vill., LBSH 33222
!*Silene antirrhina* L., LBSH 33447 (P)
!**Silene gallica* L., LBSH 33457 (P)
+*Silene subciliata* Robins., LB 18727, 18162, 32633; LBJL 32953
- Celastraceae**
Euonymus americana L., LB 32551
- Chenopodiaceae**
Dysphanis ambrosioides (L.) Mosyakin & Clemants, LB 33138
- Cistaceae**
Helianthemum georgianum Chapm., LBSH 33511
- Commelinaceae**
Commelina diffusa Burm. f., LB 32897
Commelina erecta L. var. *angustifolia* (Michx.) Fernald, LB 32653; LBSM 33548
Commelina virginica L., LB 18597, 32893
- Convolvulaceae**
Dichondra carolinensis Michx., LB 32837
Evolvulus sericeus Sw., GW 3271
Ipomoea cordatotriloba Dennst. var. *cordatotriloba*, LB 32849
Ipomoea lacunosa L., LB 32827
- Cornaceae**
!*Cornus drummondii* C.A. Mey., GW 3254; LB 32524, 18530
Cornus florida L., LB 32543, 18595
Nyssa aquatica L., LB 18601
Nyssa sylvatica Marshall, LB 32540, 18518, 18735
- Crassulaceae**
Penthorum sedoides L., LB 18851, 18780

Cucurbitaceae

Cayaponia quinquefolia (Raf.) Shinners, LB 32836
Melothria pendula L., LB 32757

Cupressaceae

Juniperus virginiana L., LBJL 32960
Taxodium distichum (L.) Rich., LB 32631a

Cuscutaceae

Cuscuta gronovii Willd. ex Schult., GW 3294, LB 32929

Cyperaceae

Bulbostylis barbata (Rottb.) C.B. Clarke, LB 28808
Carex abscondita Mack., LB 27762, 29426; LBSM 33537
Carex albicans Willd. ex Spreng. var *australis* (L.H. Bailey) Retting, LBSH 33374
Carex albolutescens Schwein., LB 18507, 18575
Carex atlantica L.H. Bailey subsp. *capillacea* (L.H. Bailey) Reznicek, LB 27724 (P), 19023; LBSH 33334, 33404 (H)
Carex basiantha Steud., LB 27765, 29429
Carex blanda Dewey., LB 27759, 27752, 25183
Carex brevior (Dewey) Mack. ex Lunell, LB 18505b
Carex caroliniana Schwein., LB 27740(P); LBSH 33376
Carex cephalophora Muhl. ex Willd., LBPR 33359
Carex cherokeensis Schwein., LB 32506
Carex complanata Torr. & Hook., LB 18523; LBPR 33344
Carex corrugata Fernald, LB 27767, 18534
Carex crebriflora Wiegand, LB 27764, 2774; LBSH 33259 (P), 33369
Carex crus-corvi Shuttlew. ex Kunze, LBSM 33517
Carex debilis Michx. var. *debilis*, LB 27758, 23878, 18491
Carex digitalis Schkuhr ex Willd. var. *floridana* (L.H. Bailey) Naczi & Bryson, LB 27761, 27760, 27756, 27737
Carex festucacea Schkuhr ex Willd., LBPR, 33363; LBSH 33425
Carex flaccosperma Dewey, LB 27749, 27738; LBPR 33362
Carex frankii Kunth, LB 15433(P), 28249 (P)
Carex glaucescens Elliott, LB 33161 (P)
Carex hyalina Boott, LBSM 33523
Carex intumescens Rudge, LB 27722, 18576
Carex joorii L.H. Bailey, LB 18734, 15501, 15441 (P)
Carex leavenworthii Dewey, LB 27766
Carex leptalea Wahlenb. subsp. *harperi* (Fernald) W. Stone, LB 27728(P), 33163 (P); LBJL 19024
Carex longii Mack., LBSH 33389
Carex lupulina Muhl. ex Willd., LBSH 33463 (P)
Carex oxylepis Torr. & Hook., LB 27754, 18537; LBSH 33426
Carex planispicata Naczi, LB 27757; LBPR 33357
Carex reniformis (L.H. Bailey) Small, LBPR 33343; LBSH 33407, 33370, 33429
Carex retroflexa Muhl. ex Willd., LB 18531
Carex striatula Michx., LB 29427, 27755, 18605, 18501
Carex triangularis Boeck., LBPR 33341; LBSH 33381
Carex tribuloides Wahlenb. var. *sangamonensis* Clokey, LB 28245 (P), 18507, 24134
^{!+} *Carex typhina* Michx., LBSM 33518
Cyperus acuminatus Torr. & Hooker ex Torr., LB 32875, 33114 (P)
Cyperus croceus Vahl, LB 28806
Cyperus erythrorhizos Muhl., LB 18839a, 32989
^{*}*Cyperus esculentus* L., LB 33109
Cyperus haspan L., LB 18613, 5828 (P), 32677, 18100a (P)

Cyperus odoratus L., LB 18839b, 33085, 33095

Cyperus retroflexus Buckley var. *retroflexus*, LB 32573

Cyperus squarrosus L., LB 33091

Cyperus strigosus L., LB 15500

Cyperus surinamensis Rottb., LB 33146

Cyperus thrysiflorus Jungh., LB 32824; LBSM 33532

Cyperus virens Michx., LB 32876

Eleocharis microcarpa Torr., LB 32679

Eleocharis montana (Kunth) Roem. & Schult., LB 32285

Eleocharis montevidensis Kunth, LBSH 33414

Eleocharis tuberculosa (Michx.) Romer & Schult., LB 18611, 32676, 15434a (P), 26615 (P)

Fimbristylis autumnalis (L.) Romer & Schult., LB 32902

^{*}*Fimbristylis miliacea* (L.) Vahl, LB 32681, 33094

Fimbristylis vahlii (Lam.) Link, LB 18833, 33087, 17510 (P), 33111 (P)

Fuirena breviseta Coville, LB 26125 (P)

Fuirena pumila (Torr.) Spreng., LB 22566 (P)

Isolepis carinata Torr., LB 18510

Rhynchospora caduca Elliott, LBSM 33531

Rhynchospora corniculata (Lam.) A. Gray, LBSM 33530

Rhynchospora globularis (Chapm.) Small var. *globularis*, LB 32707

Rhynchospora glomerata (L.) Vahl, LB 15429 (P), 26122 (P), 18741, 32940

Rhynchospora inexpansa (Michx.) Vahl, LB 32936, 15432 (P); WRC 11352

Rhynchospora mixta Britton, LB 28248 (P), 22862 (P); LBJL 32966, 19176

Scirpus cyperinus (L.) Kunth, LBJL 32969

Scleria oligantha Michx., LB 18480

Scleria triglomerata Michx., WRC 11349; LB 20592

Cyrtaceae

Cyrilla racemiflora L., LB 26114 (P), 18873, 33142

Dennstaedtiaceae

Pteridium aquilinum (L.) Kuhn var. *Pseudocaudatum* (Clute) A. Heller, LB 32556

Dioscoreaceae

Dioscorea villosa L., GW 2288, 3194, 3282; LB 32831; LBSH 33230a

Droseraceae

Drosera brevifolia Pursh, LBSH 32262, 33257 (P)

Dryopteridaceae

Athyrium filix-femina (L.) Roth subsp. *asplenioides* (Michx.) Hulten, LB 28250 (P), 32554, 18517, WH s.n.

Onoclea sensibilis L., LB 28246 (P), 27735 (P), 18495, 33108 (P)

Polystichum acrostichoides (Michx.) Schott, LB 29422, 32553, 18515, 18604

Ebenaceae

Diospyros virginiana L., LB 32860

Ericaceae

Rhododendron canescens (Michx.) Sweet, LB 27747 (P), 18748, 18487, 32625

Rhododendron viscosum (L.) Torr., LB 18512, 20170 (P), 33151 (P); CP s.n. (P)

Vaccinium arboreum Marshall, LB 18580, 33173 (P); LBSH 33455 (P)

Vaccinium corymbosum L., LB 32548, 18489, 18586

Euphorbiaceae

Acalypha gracilens A. Gray, GW 3230, 3288

Acalypha rhomboidea Raf., LB 32904 (P), 32946, 33110 (P)

Chamaesyce humistrata (Engelm.) Small, LB 18818a (P)

Chamaesyce maculata (L.) Small, LBDB 33660

Chamaesyce nutans (Lag.) Small, LB 32632a, 32948

Croton capitatus Michx., WRC 11350; LB 32861

Croton glandulosus L. var. *glandulosus*, GW 3291, LB 32941a

Croton monanthogynus Michx., LB 32640

Euphorbia corollata L., LB 32561

Euphorbia dentata Michx., GW 3432; LB 32693

Euphorbia spathulata Lam., LB 18532b

Phyllanthus caroliniensis Walter, LB 18857a, 33115 (P)

!*Phyllanthus pudens* Wheeler, LB 18818b (P)

**Phyllanthus urinaria* L., WRC 11355; LB 18866

Sebastiania fruticosa (Bartr.) Fernald, LB 27732 (P), 32547, 18485, 18598

**Triadica sebiferum* (L.) Small, LB 32544

Fabaceae

Aeschynomene indica L., LB 17513 (P)

**Albizia julibrissin* Durazz., LB 32699; LBSM 33543

Baptisia nuttalliana Small, LB 18539, 24237

Centrosema virginianum (L.) Benth., LB 18687

Cercis canadensis L. var. *canadensis*, LB 32754

Chamaecrista fasciculata (Michx.) Greene, LB 18729, 33136

Chamaecrista nictitans Moench, LB 32663

Clitoria mariana L., LB 32743

Crotalaria sagittalis L., LB 18615; LBSH 33452 (P)

Dalea phleoides (Torr. & A. Gray) Shinners var. *phleoides*, GW 3509

!*Desmodium canescens* (L.) DC., LBDB 33653

Desmodium ciliare (Willd.) DC., GW 3313b; LB 32881

Desmodium glabellum (Michx.) DC., GW 3290, 3313a; LB 32755, 32817

Desmodium paniculatum (L.) DC., LB 18161, 32922; LBDB 33665

!*Desmodium pauciflorum* (Nutt.) DC., LB 29428

Erythrina herbacea L., LB 32882

Galactia volubilis (L.) Britton, GW 3285, 3304, 3312; LB 18244

Gleditsia triacanthos L., LB 32541

Glottidium vesicarium (Jacq.) Harper, LB 32840

**Indigofera suffruticosa* Mill., LB 32570, 28805 (SBSC)

**Kummerowia striata* (Thunb.) Schlindler, LB 32698, 32811a

Lespedeza procumbens Michx., LB 32855, 32880

Lespedeza repens (L.) Barton, LB 32819

Lespedeza virginica (L.) Britton, GW 3511; LBSM 33524; LBDB 33658

!**Medicago arabica* (L.) Huds., LBSH 33223

**Medicago lupulina* L., GW 3190a, 3219a, LBSH 33210

**Medicago polymorpha* L., GW 3219b; LBSH 33233a

Mimosa hystricina (Small) B.L. Turner, LB 32858a

Mimosa latidens (Small) B.L. Turner, LBSH 33514

Mimosa strigillosa Torr. & A. Gray, LB 32712 (P), 33090

!*Rhynchosia minima* (L.) DC., LB 32822

Senna marilandica (L.) Link, GW 3227; LB 18828, 32745

Senna obtusifolia (L.) H.S. Irwin & Barneby, LB 18828, 17514 (P)

Sesbania drummondii (Rydb.) Cory, LB 33106

Sesbania herbacea (Mill.) McVaugh, LB 32918

!**Sesbania punicea* Benth., LB 22567 (P)

Sophora affinis Torr. & A. Gray, LB 32503, 33102

Strophostyles helvula (L.) Elliott, LB 32637

Strophostyles umbellata (Willd.) Britton, LB 32719

Stylosanthes biflora (L.) Britton, Sterns, & Poggenb., GW 3305; LB 32811

**Trifolium campestre* Schreb., LBSH 33227

**Trifolium dubium* Sibth., LBSH 33251 (P)

**Trifolium lappaceum* L., LB 29420

**Trifolium repens* L., GW 3240

!**Trifolium resupinatum* L., GW 3219c

Vicia ludoviciana Nutt. subsp. *leavenworthii* (Torr. & A. Gray) Lassetter & C.R. Gunn., LBSH 33224, 33235a; LB 18443

Vicia ludoviciana Nutt. subsp. *ludoviciana*, LBSH 33230

Vicia minutiflora Dietr., GW 3203, 3225, 3300; LBSH 33217

**Vicia sativa* L. subsp. *nigra* (L.) Ehrhart, GW 3226; LBSH 33228a

**Vicia villosa* Roth, LBSH 33246 (P)

Wisteria frutescens (L.) Poir., LB 18478, 18733, 32907 (P)

Fagaceae

Castanea pumila (L.) Mill., LBSH 33512

Fagus grandifolia Ehrh., LBJL 19170; LB 18163, 32557, 27730 (P)

Quercus alba L., LB 32538a, 18483

Quercus falcata Michx., LB 32814

Quercus hemisphaerica Bartram ex Willd., LB 32538, 32987, 28809, 24128

Quercus lyrata Walter, LB 32710 (P), 33124 (P)

Quercus michauxii Nutt., LB 18541; LBJL 32968

Quercus nigra L., LB 32695

Quercus pagoda Raf., LBDB 33657

Quercus phellos L., LB 32815, 27718 (P); LBSH 33462 (P)

Quercus shumardii Buckley, LB 32520; GW 3265

Quercus stellata Wangenh., LB 32756

!*Quercus texana* Buckley, LBPR 33347

Geraniaceae

Geranium carolinianum L., LBSH 33396

Grossulariaceae

Itea virginica L., LB 18488, 33140, 26123 (P); LBJL 32974

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Proserpinaca palustris L., LB 32275

Hamamelidaceae

Hamamelis virginiana L., LB 32650, 18242, 18608, LBSH 33256 (P)

Liquidambar styraciflua L., LB 29291, 32650

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Aesculus pavia L. var. *pavia*, LBSH 33248 (P)

Hydrophyllaceae

Hydrolea uniflora Raf., LB 18821

!*Nemophila aphylla* (L.) Brummitt, GW 1346, 3190b; LBSH 33215

!Phacelia hirsuta Nutt., LB 18442; LBPR 33339

Hypericaceae

- Hypericum drummondii* (Grev. & Hook.) Torr. & A. Gray, LB 32664
Hypericum galoides Lam., LB 18740
Hypericum hypericoides (L.) Crantz, LB 32629
Hypericum mutilum L., LB 18522, 33151
Triadenum walteri (J.G. Gmel.) Gleason, LB 18684, 27725 (P)
Triadenum tubulosum (Walter) Gleason, LB 32621

Hypoxidaceae

- Hypoxis curtissii* Rose, LB 18578; LBSH 33391, 33458 (P)

Iridaceae

- Herbertia lahue* (Molina) Goldblatt, LBSH 33408
^{!*}*Iris pseudacorus* L., LB 27739 (P)
Sisyrinchium angustifolium Mill., LB 18505; LBSH 33465
Sisyrinchium rosulatum E.P. Bicknell, GW 3249, LB 18524;
 LBSH 33387

Juglandaceae

- Carya aquatica* (Michx. f.) Nutt., LB 18855, 32708 (P)
Carya cordiformis (Wang.) K. Koch, LB 32892
Carya illinoensis (Wang.) K. Koch, LB 32509; LBDB 33654
^{!Carya ovata} (Mill.) K. Koch, GW 3191, 3196; LB 32858
Carya texana Buckley, LB 32883
Carya tomentosa (Poir.) Nutt., LB 18481, 33127

Juncaceae

- Juncus acuminatus* Michx., LBSH 33428
Juncus anthelatus (Wiegand) R.E. Brooks, LBPR
Juncus coriaceus Mack., LB 27748 (P)
Juncus dichotomus Elliott, LBSM 33521
Juncus diffusissimus Buckley, LB 18609; LBSH 33436 (P)
Juncus effusus L., LB 32822
Juncus marginatus Rostk. LBSH 33413, 33427
Juncus scirpoides Lam., LB 18614
Juncus tenuis Willd., LB 27746 (P), 33172 (P)
Juncus validus Coville, LB 18610, 32937

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- Hedeoma hispida* Pursh, LBSH 33430; PR s.n.
^{!*}*Hyptis alata* (Raf.) Shinners, LB 26119 (P)
^{!*}*Lamium amplexicaule* L., LBSH 33221
Lycopus rubellus Moench, GW 3309
Lycopus virginicus L., LB 18850, 32933
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Monarda punctata L. var. *lasiodonta* A. Gray, LB 18685, 28804,
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^{*}*Perilla frutescens* (L.) Britton, LB 32619
Prunella vulgaris L., LBPR 33350
Pycnanthemum albescens Torr. & A. Gray, LB 32671
Salvia lyrata L., LBSH 33213
Scutellaria elliptica Muhl., GW 3258a; LB 18593, 18240
Scutellaria integrifolia L., LB 18592; LBSH 33412
^{!*}*Scutellaria ovata* Hill, GW 3258b
Scutellaria parvula Michx. var. *parvula*, LBPR 33360; LBSM
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Stachys tenuifolia Willd., LB 32620, 26103 (P)
Teucrium canadense L., LB 28251 (P), 33165 (P)
Trichostema dichotomum L., LB 32933

Lauraceae

- Persea borbonia* (L.) Spreng., LB 29423, 32558
Sassafras albidum (Nutt.) Nees, LB 32549, 18864

Leptinaceae

- ^{*}*Landoltia punctata* (G. Mey.) Les & D.J. Crawford, LB 32863

Lentibulariaceae

- Utricularia gibba* L., LB 26117 (P), 25516 (P)

Linaceae

- Linum medium* (Planch.) Britton var. *texanum* (Planch.) Fernald,
 LBSH 33450 (P); PR s.n.

- Linum striatum* Walter, LB 18612, 24132

Loganiaceae

- Gelsemium sempervirens* St.-Hil., LB 32638

- ^{!*}*Spigelia texana* (Torr. & A. Gray) A. DC., GW 3259; LB 32838, 18704

Lygodiaceae

- ^{*}*Lygodium japonicum* (Thunb.) Sw., LB 32537; LBSH 33241

Lythraceae

- Ammannia coccinea* Rottb., LB 32896

- ^{*}*Cuphea carthagrenensis* (Jack.) J.F. Macbr., LB 18618

- Rotala ramosior* (L.) Koehne, LB 33112 (P)

Magnoliaceae

- Magnolia grandiflora* L., LB 32545

- Magnolia virginiana* L., LB 26112 (P), 18777; LB JL 32963

Malvaceae

- Hibiscus moscheutos* L. subsp. *lasiocarpus* (Cav.) O.J. Blanchard,
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- Malvastrum coromandelianum* (L.) Garcke, LB 32947

- Malvaviscus arboreus* Cav. var. *drummondii* (Torr. & A. Gray)
 Schery, LB 33145; LB JL 32971

- Modiola caroliniana* (L.) G. Don, LBSH 33324

- ^{!*}*Sida lindheimeri* Engelm. & A. Gray, LB 32569

- Sida rhombifolia* L., LB 32641

- Sida spinosa* L., LB 32910 (P)

Marsileaceae

- ^{!*}*Marsilea vestita* Hook. & Grev. subsp. *vestita*, GW 3155

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- Rhexia mariana* L. var. *marianna*, LB 32669

Melanthiaceae

- ^{!*}*Stenanthium gramineum* (Ker-Gawl.) Morong, GW 3500;
 LBSH 33510

Menispermaceae

- Cocculus carolinus* (L.) DC., LB 32835

Menyanthaceae

- ^{!*}*Nymphoides aquatica* (J.G. Gmel.) Kuntze, LB 25517 (P)

Molluginaceae

- ^{!*}*Mollugo verticillata* L., LB 32901

Moraceae

- Morus rubra* L., LB 32525

Myricaceae

- Morella caroliniensis* (Mill.) Small, LB 26124 (P), 19774, 33161
 (P); GW 3310

Morella cerifera (L.) Small, LB 28247(P)

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Nuphar advena (Aiton) W.T. Aiton, GW 3289; LBSH 33251 (P)

Oleaceae

Chionanthus virginicus L., LB 18503, 20593, 33176 (P); LBJL 32976

Forestiera acuminata (Michx.) Poir., LB 32843; LBJL 32981 (P); MM 8225

Fraxinus americana L., LB 29431, 32502, 18590

Fraxinus pennsylvanica Marshall, LB 32711 (P)

**Ligustrum sinense* Lour., LB 32652

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Ludwigia alternifolia L. LB 26120a (P), 18589, 18728, 32658

Ludwigia decurrens Walter, LB 18730, 32900

Ludwigia glandulosa Walter var. *glandulosa*, LB 32716

Ludwigia hirtella Raf., LB 18739b

Ludwigia leptocarpa (Nutt.) Hara, LB 33121 (P)

Ludwigia microcarpa Michx., LB 26120 (P), 25518 (P)

Ludwigia octovalvis (Jacq.) P.H. Raven, LB 18101 (P), 32848

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Oenothera laciniata Hill, LB 27717 (P), 20169 (P)

Oenothera speciosa Nutt., LBSH 33406

Ophioglossaceae

Botrychium biternatum Underwood, LB 18744, 33123 (P)

!*Ophioglossum vulgatum* L., GW 3193

Orchidaceae

!*Habenaria repens* Nutt., LB 5825 (P); JS 280 (P)

Platanthera clavellata (Michx.) Luer, LB 20591; LBJL s.n.

Platanthera cristata (Michx.) Lindl., LB 15431 (P); JL s.n. (P)

Spiranthes cernua (L.) Rich., LB 18861, 33137

!*Spiranthes ovalis* Lindl., LBJL 32959

Spiranthes praecox (Walter) S. Watson, GW 3257, 3380; LBSH 33367

Tipularia discolor (Pursh) Nutt., LB 18492, 18514, 18731; JL s.n.

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Osmunda cinnamomea L., LB 18747

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Oxalis corniculata L. var. *wrightii* (A. Gray) B.L. Turner, LB 32654a, 33117 (P), 27715 (P); LBSH 33319

**Oxalis debilis* Kunth var. *corymbosa* (DC.) Lourteig, LBSH 33258 (P)

Oxalis lyonii Pursh, LBSH 33235

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Plantago aristata Michx., LBSM 33536

**Plantago major* L., LBSH 33367

Plantago rhodosperma Dcne., LBSH 33384

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Platanaceae

Platanus occidentalis L., LB 32894

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Agrostis hyemalis (Walter) Britton, Sterns & Poggenb., LBSH 33390

Agrostis perennans (Walter) Tuck. var. *perennans*, LB 18167, 33143, 33156 (P); LBJL 32956

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Arundinaria gigantea (Walter) Muhl., LB 32539

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**Briza minor* L., LBSH 33379

**Bromus catharticus* Vahl, LBSH 33393

**Bromus japonicus* Thunb. ex Murray, LBSH 33380; LBSM 33550

!*Bromus pubescens* Muhl. ex Willd., LBSH 33453 (P)

!**Bromus secalinus* L., LBSM 33545

Cenchrus spinifex Cav., LB 32949

Chasmanthium latifolium (Michx.) H.O. Yates, LB 26107 (P), 18596, 32513

Chasmanthium laxum (L.) H.O. Yates, GW 2314; LBDB 33663

Chasmanthium sessiliflorum (Poir.) H.O. Yates, LB 32514, 32885

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Dichanthelium acuminatum (Sw.) Gould & C.A. Clark var. *acuminatum*, LBSH 33459 (P)

Dichanthelium acuminatum (Sw.) Gould & C.A. Clark var. *lindheimeri* (Nash) Gould & C.A. Clark, LB 33093; LBSM 33528 (P), 33519

Dichanthelium boscii (Poir.) Gould & C.A. Clark, LB 29430, 29424, 29425; LBSH 33401 (H)

Dichanthelium commutatum (Schult.) Gould subsp. *commutatum*, LB 27742a (P), 18498

Dichanthelium dichotomum (L.) Gould subsp. *dichotomum*, LB 18602, 22562

Dichanthelium dichotomum (L.) Gould subsp. *microcarpon* (Muhl. ex Elliott) Freckmann & Lelong, LB 32818; LBJL 19177; LBSH 33371, 33435a (P)

Dichanthelium laxiflorum (Lam.) Gould, LB 27744 (P), 18504, LB 32661, 18581

Dichanthelium oligosanthes (Schult.) Gould var. *oligosanthes*, LB 32824a; LBSM 33549

Dichanthelium oligosanthes (Schult.) Gould var. *scribnerianum* (Nash) Gould, LB 18521; LBJL 32965; LBSH 33314, 33454 (P)

Dichanthelium scoparium (Lam.) Gould, LBJL 32965

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- Digitaria ciliaris* (Retz.) Koeler, LB 32529a, 32645, 33092
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 !*Echinochloa crus-pavonis* (Humb., Bonpl. & Kunth) Schult. var.
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 **Eragrostis japonica* (Thunb.) Trin., LB 18836, 33089
 !*Eragrostis reptans* (Michx.) Nees, LB 18834, 32903, 33119 (P)
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 !*Leptochloa panicea* (Retz.) Ohwi subsp. *mucronata* (Michx.)
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 !*Limnodea arkansana* (Nutt.) L.H. Dewey, LBSH 33394
 **Lolium perenne* L., LB 33231a
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 !*Muhlenbergia schreberi* J.F. Gmel., LB 33170 (P)
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 **Poa annua* L., LBSH 33207
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 +*Schedonorus arundinaceus* (Schreb.) Dumort., LBSH 33383
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 !*Schizachyrium scoparium* (Michx.) Nash var. *scoparium*, LB
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 !*Setaria corrugata* (Elliott) Schult., LB 28807
 !+*Sphenopholis longiflora* (Vasey ex L.H. Dewey) Hitchc., LB
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 +*Sphenopholis obtusata* (Michx.) Scribn., LB 18526; LBSH
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!Spermacoce glabra Michx., LB 17511 (P), 33096
- Rutaceae**
Ptelea trifoliata L var. *mollis* Torr. & A. Gray, LB 22571, 18479, 32931; LBSH 33375
Zanthoxylum calva-herculis L., LB 28254 (P)
- Salicaceae**
!Populus deltoides Bart. ex Marshall subsp. *deltoides*, LB 32518; GW 3232
Salix nigra Marshall, LBDB 33656
- Sapindaceae**
!Cardiospermum halicacabum L., LB 32839, 32905 (P)
- Sapotaceae**
Sideroxylon lanuginosum Michx., GW 3268; LBPR 33346
- Saururaceae**
Saururus cernuus L., LB 18577; LBSH 33437 (P)
- Scrophulariaceae**
Agalinis fasciculata (Elliott) Raf., LB 32871
Agalinis purpurea (L.) Penn., LB 33135
Aureolaria grandiflora (Benth.) Penn., LB 26109 (P)
Gratiola brevifolia Raf., LB 18619
Gratiola neglecta Torr., LB 18538
Gratiola pilosa Michx., LB 18617
Gratiola virginiana L., LB 27726 (P), 18500; LBSH 33402 (H)
Leucospora multifida (Michx.) Nutt., LB 18834
Lindernia dubia (L.) Penn., LB 18830, LB 33118 (P)
*!*Mazus pumilus* (Burm.f.) Steenis, LBSH 33227a
Mecardonia acuminata (Walter) Small, WRC 11351; LB 33148
Mecardonia procumbens (Mill.) Small, GW 3233
Micranthemum umbrosum (J.F. Gmel.) S.F. Blake, LB 18852a, 33166 (P)
Mimulus alatus Aiton, LB 18737, 5838 (P); LBJL 32973
Nuttallanthus texana (Scheele) Sutton, LBSH 33320
!Pedicularis canadensis L., LBSH 33322
!+Penstemon tenuis Small, LB 18535; LBPR 33348; LBSH 33422
Scoparia dulcis L., LB 18732, 32941
**Veronica arvensis* L., LBSH 33203, 33239
- Veronica peregrina* L. subsp. *xalapensis* (Kunth) Pennell, GW 3314, 3366
*!*Veronica persica* Poir., LBSH 33229
- Selaginellaceae**
Selaginella apoda (L.) Spreng., LB 27738 (P), 20168 (P)
- Smilacaceae**
Smilax bona-nox L., LB 32627
Smilax glauca Walter, LB 18584, 32753
Smilax laurifolia L., LB 27736, 18781, 18746
Smilax pumila Walter, LB 18599; LBJL 32967
Smilax rotundifolia L., LB 33175 (P)
Smilax smallii Morong, LB 32639
- Solanaceae**
!Physalis angulata L., LB 18841, 33120 (P)
Physalis heterophylla Nees, LB 25168, 32886; LBSH 33238; LBPR 33345
Solanum carolinense L., LB 33144
- Sparganiaceae**
Sparganium americanum Nutt., LB 15436 (P), 33171 (P), 25516a
- Sphenocleaceae**
!Sphenoclea zeylandica Gaertn., LB 18822
- Styracaceae**
Styrax americana Lam., LBJL 32980 (P), 33164 (P), 33141; LB 18165
- Symplocaceae**
Symplocos tinctoria (L.) L. Her., LB 32535, 18508
- Thelypteridaceae**
Thelypteris kunthii (Desv.) Morton, LB 32557a, 28244 (P)
- Tiliaceae**
Tilia americana (L.) var. *caroliniana* (Mill.) Castig., LB 32531
- Typhaceae**
Typha latifolia L., LBSH 33441 (P)
- Ulmaceae**
Celtis laevigata Willd., LB 32891
Planera aquatica L., LB 18819 (P), LB 32748, 27745 (P)
Ulmus alata Michx., LB 32655
Ulmus americana L., LB 32912 (P)
!Ulmus crassifolia Nutt., LB 32709 (P)
- Urticaceae**
Boehmeria cylindrica (L.) Sw., LB 26105, 32889
!Urtica chamaedryoides Pursh, LB 25180; GW 3156; LBSH 33243
- Valerianaceae**
Valerianella radiata (L.) Dufr., LB 18475; LBSH 33237
- Verbenaceae**
Callicarpa americana L., LB 32623
**Glandularia pulchella* (Sweet) Tronc., LBSH 33234a
**Verbena brasiliensis* Vell., LB 32701
Verbena halei Small, LBSH 33385
**Verbena rigida* (L.) Spreng., LBSH 33442 (P)

Violaceae

- Viola lanceolata* L., LB 27721(P)
Viola palmata L., GW 3192, 3306, 3307; LBSH 33214
Viola primulifolia L., LB 27731(P), 27716, 18495, 33167 (P)
Viola sororia Willd. var. *missouriensis* (Greene) McKinney, GW 3218, 3302; LBSH 33226
!*Viola sororia* Willd. var. *sororia*, LBDB 33659

Vitaceae

- Ampelopsis arborea* (L.) Koehne, LB 32658
!*Ampelopsis cordata* Michx., LB 32515, 32658; LBPR 33342;
GW 3246

Parthenocissus quinquefolia (L.) Planch., LB 32521

Vitis aestivalis Michx., LB 32660

Vitis cinerea (Engelm.) Engelm. ex Millardet var. *cinerea*, GW 3269

!*Vitis mustangensis* Buckley, LBDB 33654a

Vitis palmata Vahl, LB 18820a (P); GW 3244

Vitis rotundifolia Michx., LB 32635

Xyridaceae

- Xyris jupicai* L. Rich., LB 26121, 26116 (P), 32668

NOTES

Eupatorium semiserratum. See Brown et al. (2007) regarding the status of this species in Texas.

Prenanthes barbata. Poole et al. (2007) mapped it in 12 Texas counties. This is the first record for Liberty County.

Verbesina helianthoides. See Brown et al. (2007) regarding this species in Liberty County.

Silene subciliata. Poole et al. (2007) mapped it in 8 Texas counties. All known Liberty County records are from the Menard Creek Unit.

Carex typhina. Both Stanley Jones in Diggs et al. (2006) and Turner et al. (2003) mapped it in 7 north-east Texas counties. However, in Diggs et al. (loc. cit.) there is one record farther south in Jasper County. Our collection is a new county record farther south than those previously recorded. There were numerous individuals on sandy alluvial soil along Menard Creek a short distance upstream from the confluence with the Trinity River.

Schedonorus arundinaceus. We are following Darbyshire (2007). Other synonyms are *Festuca arundinacea* Schreb. and *Lolium arundinaceum* (Schreb.) Darbysh.

Sphenopholis longiflora. Both this grass and *S. obtusata* are present in this unit. In many publications, *S. longiflora* is treated as a variety of *S. obtusata*. At least in this unit, species rank is justified for various reasons including no plants were found with intermediate morphology; habitat difference, with *S. longiflora* in bottomland habitats and *S. obtusata* in upland habitats; and anthesis period, with *S. longiflora* in flower in March and shedding mature spikelets when *S. obtusata* is coming into flower in April.

Penstemon tenuis. Some authors merge this species with *P. laxiflorus*. All of our plants had glabrous stems or sparse hairs in thin lines, the flowers were pink, and were collected in bottomland hardwoods; thus are referable to this species. We found no penstemons that we could call *P. laxiflorus*. The differences between the 2 species are readily discernable when both are observed in the field.

Mitracarpus hirtus. See Brown et al. (2007) regarding the presence of this species in east Texas.

DISCUSSION

There are 127 families and 396 genera for the 689 taxa (619 native) on the Menard Creek Corridor Unit list. Eight families: Asteraceae (88 taxa), Poaceae (82 taxa), Cyperaceae (67 taxa), Fabaceae (51 taxa), Scrophulariaceae (21 taxa), Lamiaceae (18 taxa), Euphorbiaceae (16 taxa), and Fagaceae (13 taxa) account for 51% of all taxa collected. The genera with 10 or more taxa are *Carex* (35 taxa), *Cyperus* (12 taxa), *Quercus* (11 taxa), *Dichanthelium* (11 taxa), and *Juncus* (10 taxa).

While it is the case that our list is incomplete, as are all floras, we believe that we have collected 90+ % of the taxa. We estimate that the Menard Creek Corridor Unit has about 625 to 650 native species/taxa.

Of the 7 Units inventoried so far, this unit has 86 taxa that have not been found in the other surveyed units including a preliminary checklist of the Jack Gore Baygall/Neches Bottom Unit. Thus 12% of the Menard Creek Unit taxa have not been found in the other inventoried units.

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REFERENCES

- ARONOW, S. 1981. Notes on the geologic units: Big Thicket National Preserve. Big Thicket National Preserve, Beaumont, Texas.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, P.A. HARCOMBE, W.W. PRUESS, I.S. ELSIK, AND D. JOHNSON. 2005. Annotated checklist of the vascular flora of the Turkey Creek Unit of the Big Thicket National Preserve, Tyler and Hardin counties, Texas. *Sida* 21:1807–1827.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, P.A. HARCOMBE, W.W. PRUESS, I.S. ELSIK, AND S.D. JONES. 2006a. Annotated checklist of the vascular flora of the Big Sandy Creek Unit of the Big Thicket National Preserve, Polk County, Texas. *Sida* 22:705–723.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, P.A. HARCOMBE, W.W. PRUESS, I.S. ELSIK, AND S.D. JONES. 2006b. Annotated checklist of the vascular flora of the Lance Rosier Unit of the Big Thicket National Preserve, Hardin County, Texas. *Sida* 22:1175–1189.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, P.A. HARCOMBE, W.W. PRUESS, I.S. ELSIK, AND S.B. WALKER. 2008. Annotated checklist of the vascular flora of the Beech Creek Unit of the Big Thicket National Preserve, Tyler County, Texas. *J. Bot. Res. Inst. Texas* 2:651–660.
- BROWN, L.E., B.R. MACROBERTS, M.H. MACROBERTS, W.W. PRUESS, I.S. ELSIK, AND S.B. WALKER. 2008b. Annotated Checklist of the Vascular Flora of the Loblolly Unit of the Big Thicket National Preserve, Liberty County, Texas. In press, *J. Bot Res. Inst. Texas* 2:1481–1489.
- BROWN, L.E., E.L. KEITH, D.J. ROSEN, AND J. LIGGIO. 2007. Notes on the flora of Texas with additional and other significant records. III. *J. Bot. Res. Inst. Texas* 1:1255–1264.
- DARBYSHIRE, S.J. 2007. *Schedonorus*. In: *The flora of North America*. Vol. 24. Oxford University Press, New York.
- DESHOTELS, J.D. 1978. Soil survey for the Big Thicket National Preserve, Texas. USDA Soil Conservation Service and Texas Agricultural Experiment Station, College Station.
- DIGGS, G.M., B.L. LIPSCOMB, M.D. REED, AND R.J. O'KEENNAN. 2006. Illustrated flora of east Texas. *Sida, Bot. Misc.* 26: 1–1594.
- GRIFFITH, K.L. 1996. Soil survey of Liberty County, Texas. USDA and Texas Agricultural Experiment Station, College Station.
- HARCOMBE, P.A. AND P.L. MARKS. 1979. Forest vegetation of the Big Thicket National Preserve. Report to National Park Service, Santa Fe, New Mexico.
- JONES, S.D., J.K. WIPFF, AND P.M. MONTGOMERY. 1997. Vascular plants of Texas. Univ. of Texas Press, Austin.
- KARTESZ, J.T. 1999. A synonymized checklist and atlas with biological attributes for the vascular flora of the United States, Canada, and Greenland. 1st ed. In: J.T. Kartesz and C.A. Meacham. *Synthesis of North American flora.. Version 1.0*. North Carolina Botanical Garden, Chapel Hill.
- MACROBERTS, B.R., M.H. MACROBERTS, AND L.E. BROWN. 2002. Annotated checklist of the vascular flora of the Hickory Creek Unit of the Big Thicket National Preserve, Tyler County, Texas. *Sida* 20:781–795.
- MARKS, P.L. AND P.A. HARCOMBE. 1981. Forest vegetation of the Big Thicket, southeast Texas. *Ecol. Monogr.* 51:287–305.
- PEACOCK, H.H. 1994. *Nature lover's guide to the Big Thicket*. Texas A&M University Press, College Station.
- POOLE, J.M., W.R. CARR, D.M. PRICE, AND J.R. SINGHURST. 2007. Rare plants of Texas. Texas A&M University Press, College Station.
- SHELBY, C.A., M.K. McGOWEN, S. ARONOW, W.L. FISHER, L.F. BROWN, J.H. McGOWEN, C.G. GROAT, AND V.E. BARNES. 1992. Geologic atlas of Texas: Beaumont Sheet. Bureau of Economic Geology, University of Texas, Austin.